Remarks/Arguments:

Claims 1-16 stand rejected. Claims 1-5 and 14 have now been cancelled. Claims 17-21 are newly added.

Section 102 Rejections

Claims 1-5, 7 and 9-16 have been rejected as being anticipated by Sullivan. Applicants respectfully submit that this rejection is overcome for the reasons set forth below.

Amended <u>claim 11</u> now includes features which are not suggested by the cited reference, namely:

> (b)   authenticating by the operating system the application program;

> step (b) further includes **determining a license classification of the application program, in which the classification is one of (i) display-only permitted <u>and</u> (ii) recording permitted**.

The basis for amended claim 11 may be found, for example, in now cancelled claim 14.

Sullivan discloses an interface unit connected to a programmable unit. The interface unit includes a time-sensitive key (TSK). The programmable unit is allowed to receive visual contents from the interface unit, after establishing that an identical time-sensitive key (TSK) is also contained in the programmable unit. As disclosed at column 3, lines 60-65, the interface unit and the programmable unit are both periodically loaded with the same time-sensitive key (TSK). The TSK may be updated monthly or may be updated daily.

The Office Action, at page 6, states that Sullivan discloses at column 1, lines 43-51 and column 9, lines 23-33, the features of "determining a license classification of the application program, in which the classification is one of (i) display-only permitted and (ii) recording permitted. Applicants have examined column 1 and column 9 of Sullivan and cannot find such disclosure or suggestion. Favorable reconsideration is requested for amended claim 11.

<u>Claims 12-13 and 15-16</u> depend from amended claim 11 and are, therefore, not subject to rejection in view of the cited reference for at least the same reasons set forth for amended claim 11.

Section 103 Rejections

<u>Claim 6</u> has been rejected as being obvious in view of Sullivan and Togawa. Applicants respectfully submit that this rejection is overcome for the reasons set forth below.

Claim 6 includes features which are not suggested by the cited references, namely:

> the system section includes a **plurality of tamper verification functions, and a tamper code** associated with a designated type of tamper verification function ...

> the system section **reads the tamper code and its associated type information** from the application software section ...

> using the tamper verification function corresponding to the type, verifies whether or not the application software has been tampered with, and

> ➤ if it is found that the application software has been tampered with, **the system section reports the result of the verification**.

Claim 6 explicitly recites several tamper verification functions. Furthermore, claim 6 recites that a tamper verification function is selected based on an associated type of information in the application software. Claim 6 further includes that the system section verifies whether the application software has been tampered with, and if it has been tampered with, then the system section reports the result of that verification.

With respect to Sullivan, the Office Action admits that Sullivan does **not** include **a plurality of tamper verification functions**, and does **not include a tamper code and an associated type of information** embedded in the software application program. Furthermore, the Office Action admits that the system section does **not read a tamper code and its associated type of information from the application software**. Furthermore, based on that reading, the system section does **not select a corresponding tamper verification function to use for verifying whether the software application program has been tampered with**.

Togawa discloses a system for exterminating a computer virus using a plurality of virus extermination programs. Togawa further discloses selecting a specific virus extermination program to execute the virus extermination, based on the virus type detected in the software application program. The Office Action states that the virus extermination programs and the virus type detected in the application program are analogous to the tamper verification functions and tamper codes recited in claim 6.

Applicants respectfully disagree with this assertion. If a new virus breaks out, Togawa must develop a new program, before he can exterminate the virus. Consequently, with more virus outbreaks, Togawa must develop more programs, so that he may exterminate a specific virus found in an application program.

The features of claim 6, however, advantageously do not require developing new programs to exterminate new viruses. Instead, the invention of claim 6 detects that the application program has been tampered with, and then the invention alerts the user of that tampering. The invention of claim 6 does **not** exterminate any virus. The invention of claim 6 is, thus, different from the disclosure of Togawa.

Togawa does **not** disclose **a tamper code and its associated type information** being read from the application software into the system section. Togawa does **not** disclose using **a tamper verification function corresponding to the type for verifying whether or not the application software has been tampered with**. Togawa does **not** disclose that if tampering in the application software is detected, then simply **reporting the result of that verification**. Togawa does **not report any results of tampering** but, rather, provides another program into the application program for exterminating a virus.

Applicants submit that detecting tampering of an application program based on a tamper code is different from detecting that a virus has modified an application program. The invention, as recited in claim 6, advantageously provides access rights for an application program, if it obeys copyrights. It does not attempt to exterminate a virus.

The operating system of the invention may prepare a predetermined number of types of tamper verification functions by agreement between the operating system implementer and the application software implementer. The invention, as recited in

claim 6, may cope with any illegitimate change or tampering of software. It does not require the disadvantage of adding new programs to exterminate new viruses.

Claim 6 is, therefore, different from the cited references. Favorable reconsideration is respectfully requested.

Newly Added Claim 17

The features of claim 17 have been obtained by combining claims 6, 11 and 14. Claim 17 includes, as discussed above with respect to claim 11, "determining a license classification of the application program, in which the classification is one of (i) display-only permitted and (ii) recording permitted. These features are not suggested by any of the cited references.

Furthermore, claim 17 includes the following features:

> (b)   providing **a tamper code**, associated with a **designated type of tamper verification function**, to the application program; ....

> (d)   reading, by the operating system, the **tamper code and its associated type information** from the application program; ....

> (e)   using, by the operating system, the tamper code and its associated type information with a **corresponding tamper verification function** to verify whether or not the application program has been tampered with, and

> if it is found that the application program has been tampered with, the **operating system reports the results of the verification** ...

These features, although not the same, are similar to the features of claim 6. Newly added claim 17 is, therefore, not subject to rejection in view of the cited references for the reasons set forth for **both** claim 6 and claim 11.

Newly Added Claims 18 and 19

Claim 18 includes features of now cancelled claims 1 and 3 and **pending claim 6**. Newly Added claim 18 further includes the following features:

> the judgment in the system section is made by using a CRL (Certification Revocation List) listing illegitimate or legitimate application software, and

> **listing at least tamper type information** ...

The Office Action, at page 3, states that Sullivan teaches using a CRL listing illegitimate or legitimate application software. Applicants have reviewed Sullivan, at column 4, lines 7-13, and cannot find a Certification Revocation List for listing illegitimate or legitimate application software.

Furthermore, the feature of the CRL including **at least tamper type information** is not included in the "Revocation Information" of the digital certificate used to identify the preloaded digital certificate. Moreover, claim 18, includes the features of **claim 6** and is, therefore, not subject to rejection in view of the cited references for the same reasons set forth for claim 6. Favorable consideration is requested for newly added claim 18.

Although not the same, newly added method claim 19 includes features similar to newly added apparatus claim 18. Claim 19 is, therefore, not subject to rejection in view of the cited references for the same reasons set forth for newly added claim 18.

Newly Added Claims 20 and 21

Newly added apparatus claim 20 includes features taken from claims 1, 3, 6, 7 and 8. Newly added claim 20 further includes the feature of **the CRL having at least tamper type information**.

Newly added method claim 21 includes features similar to apparatus claim 20.

Claims 20 and 21 are not subject to rejection in view of the cited references for at least the same reasons set forth for claim 6.

Amended Claim 7

Claim 7 has been amended to include the following feature:

> ➢   the system section sends data to the application section, by embedding into the data, **information distinguishing application software** residing in the application software section.

Amended claim 7 now recites that information embedded into the data includes information for distinguishing application software residing in the application software section.   The embedded information is used for distinguishing one application software from another.

Neither Sullivan, nor any of the other cited references, discloses embedding into the application software, by the application section, data that includes information for distinguishing application software residing in the application software section.

Sullivan discloses that an application program may be identified by its TSK. It is respectfully submitted, however, that the application program cannot be distinguished by using the TSK. The TSK may be used for authenticating software between an application program and a operating system. The TSK may be used for ciphering and deciphering contents. TSK, however, cannot be used to distinguish one application program from another application program.

Claim 8

Claim 8 is rejected as being obvious in view of Sullivan and Harvey. Applicants respectfully submit that this rejection is overcome for the reasons set forth below.

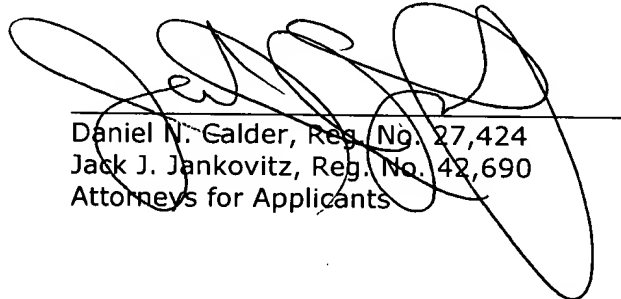Claim 8 includes features which are not suggested by the cited references, namely:

> ➢   information concerning the application software is **information indicating the name of the application software, or the version number of the application software, or a tamper code, or the type of a tamper resistance verification function, or information concerning a user**.

Claim 8 depends from claim 7 and is, therefore, not subject to rejection in view of the cited references for at least the same reasons set forth for claim 7.

Conclusion

Claims 6-13 and 15-21 are in condition for allowance.

Respectfully submitted,

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